

REMARKS

Applicant respectfully requests re-consideration of the application in view of the amendments and the arguments presented below.

Summary of Office Action

Claims 1-22 are pending.

The drawings were objected to.

Claims 1-6, 9-17, 20 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,295,343 B1 of Hjartarson, et al. ("Hjartarson") in view of U.S. Patent No. 5,452,345 of Zhou ("Zhou").

Claims 7-8 and 18-19 were rejected under 35 U.S.C. § 103 as being unpatentable over Hjartarson in view of Zhou and U.S. Patent No. 5,835,533 of Booth, et al. ("Booth").

Claims 21-22 were rejected under 35 U.S.C. § 103 as being unpatentable over Hjartarson in view of Zhou and U.S. Patent No. 6,226,331 B1 of Gambuzza ("Gambuzza").

Response to Drawing Objections

The Examiner objected to drawings 1-3, 4A, and 4B as illustrating only prior art. Accompanying this Amendment are replacement drawing sheets for Figures 1-3, 4A and 4B. Applicant has designated Figures 1-3 and 4A with the legend "Prior Art". Applicant respectfully disagrees with the Examiner as to Figure 4B because Figure 4B illustrates a high level integration of POTS and DSL linecards as claimed by applicant, thus Figure 4B has not been designated with a "Prior Art" legend.

Applicant respectfully submits that the objections to the drawings have been overcome.

Response to 35 U.S.C. § 103 rejections

Claims 1-6, 9-17, 20 were rejected as being unpatentable over Hjartarson in view of Zhou.

Applicant submits that the claims 1-6, 9-17, and 20 are patentable over the cited references.

With respect to Hjartarson, the Examiner has stated:

Hjartarson et al teach a subscriber line interface circuit apparatus shown in Fig. 8, comprising:

a first driver [Fig. 8] for driving *a upstream data signal* in a non-voiceband range [Fig. 1a];

a second driver [Fig. 8] for driving *a upstream voice signal* in a voiceband range [Fig. 1a] onto the subscriber line; and

receiver circuitry [Fig. 8] comprised of a feed resistor (418) coupled to provide an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line [Figs 6-9; col. 6, lines 17-24];

wherein the first driver and receiver circuitry reside on a same integrated circuit (i.e., integrated line card 400)[Fig. 4; col. 5, lines 31-44; col. 7, lines 36-55]

(09/27/2005 Office Action, pgs 2-3)(*emphasis added*)

Applicant traverses the Examiner's characterization of Hjartarson. First, there is no teaching or suggestion that Hjartarson's driver and receiver circuitry reside on the same integrated circuit die. The term "integrated line card" cited by the Examiner refers to the integration of the POTS and xDSL functionality onto a single line card instead of the prior art practice of maintaining separate POTS and xDSL line cards. (Hjartarson, col. 5, lines 31-44). This is not equivalent to residing on the same integrated circuit die. Applicant further submits that a line card is not an integrated circuit.

Second, the purpose of Hjartarson's feed resistor 418 is to sense the current in the line for the purpose of synthesizing an impedance. (Hjartarson, col. 5, lines 31-44; col. 6, lines 17-24). Any separation of upstream and downstream and voice and data occurs within Hjartarson's xDSL modem 408 and POTS circuit 406. Hjartarson's feed resistor is not capable of separating the upstream data signal and the upstream voice signal from the upstream signal carried by the subscriber line as alleged by the Examiner.

Third applicant notes that the claim language relating to the first and second drivers refers to downstream data signals, not the upstream data signals as alleged by the Examiner. The scenario suggested by the Examiner would render the receiver circuitry redundant since the same signals are already being supplied by the first and second drivers. Applicant submits that the Examiner's characterization is incorrect. Even if one assumed *arguendo* that it was correct, it would be irrelevant since applicant's claims are directed towards driving downstream data. The Examiner must also note that the claimed drivers are transmitting in a direction (i.e., downstream) opposite from the direction that the claimed received signals (i.e., upstream) are traveling. The Examiner's interpretation of Hjartarson requires the transmitter and receiver to be handling signals traveling the same direction (i.e., upstream). Even if true, this is irrelevant in view of the opposing nature of the claimed signal directions.

As noted by the Examiner, Hjartarson does not teach or suggest a driver for driving a metering signal onto a subscriber line.

Applicant respectfully submits that Hjartarson does not teach or suggest a SLIC apparatus including:

- (1) *a first driver for driving a downstream data signal in a non-voiceband range and a metering signal onto a subscriber line;*
- (2) *receiver circuitry providing an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line; and*
- (3) *wherein the first driver and receiver circuitry reside on the same integrated circuit die.*

In contrast, claims 1 and 12 include the language:

1. *A subscriber line interface circuit apparatus, comprising:
a first driver for driving a downstream data signal in a non-voiceband range and a metering signal onto a subscriber line;
a second driver for driving a downstream voice signal in a voiceband range onto the subscriber line; and
receiver circuitry coupled to provide an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line, wherein the first driver and receiver circuitry reside on a same first integrated circuit die.*

(Claim 1)(emphasis added)

12. *A subscriber line interface circuit apparatus, comprising:
first driver circuitry for combining and driving a downstream data signal
and a metering signal onto a subscriber line;
second driver circuitry for driving a downstream voice signal onto
the subscriber line; and
receiver circuitry for receiving and separating an upstream signal from
the subscriber line into an upstream voice signal and an upstream data signal,
wherein the first driver circuitry and the receiver circuitry reside on a same first
integrated circuit die exclusive of the second driver circuitry.*

(Claim 12)(emphasis added)

Although Zhou has been cited for teaching a metering signal, Zhou does not make up for the above-referenced deficiencies of Hjartarson. Applicant therefore respectfully submits claims 1 and 12 are patentable over the cited references under 35 U.S.C. § 103.

Given that claims 2-11 depend from claim 1 and claims 13-22 depend from claim 12, applicant submits claims 2-11 and 13-22 are likewise patentable over the cited referenced under 35 U.S.C. § 103.

Applicant submits that the 35 U.S.C. § 103 rejections have been overcome.

Conclusion

In view of the arguments presented above, applicant respectfully submits the applicable rejections and objections have been overcome. Accordingly, claims 1-22 should be found to be in condition for allowance.

If there are any issues that can be resolved by telephone conference, the Examiner is respectfully requested to contact the undersigned at (512) 858-9910.

Respectfully submitted,

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